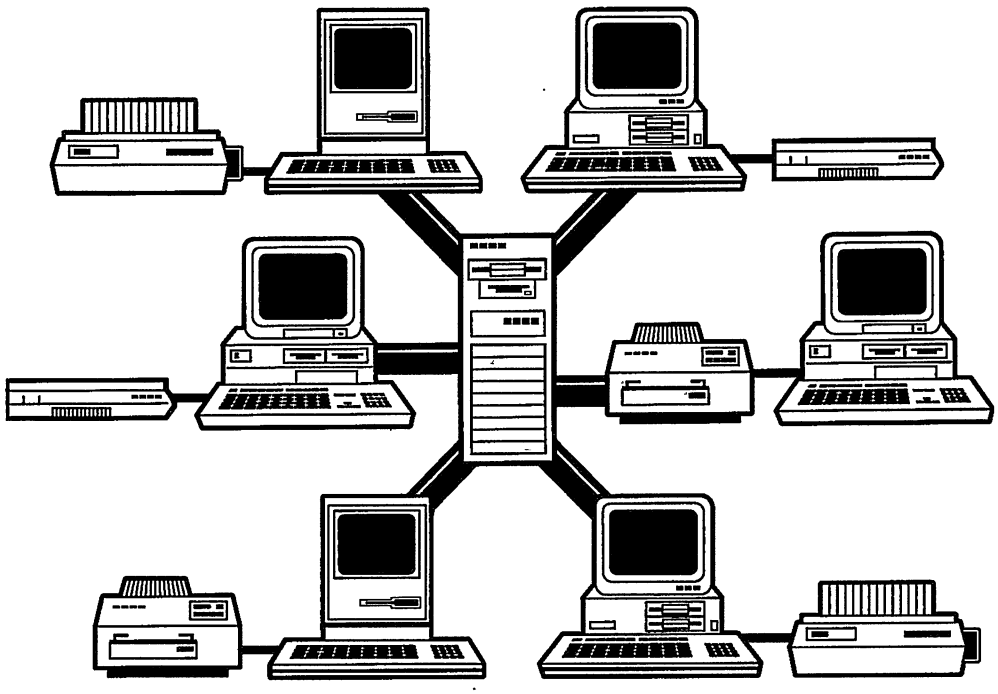
# Using Technology in Missouri Schools —

## A PLANNING GUIDE



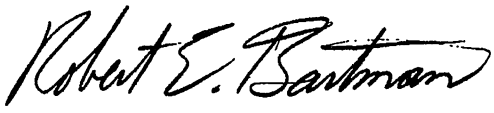
**April 1994**
**Missouri Department of**
**Elementary and Secondary Education**
*Robert E. Bartman, Commissioner of Education*

# Foreword

One of the goals of the Outstanding Schools Act of 1993 is to expand the use of technology in Missouri's public schools. The new law authorizes special grants to help school districts acquire new technology for instruction and management. The new law also earmarks funds for professional development activities (both at the state and local levels), and this provision can be a major asset in supporting technology-related training for school personnel.

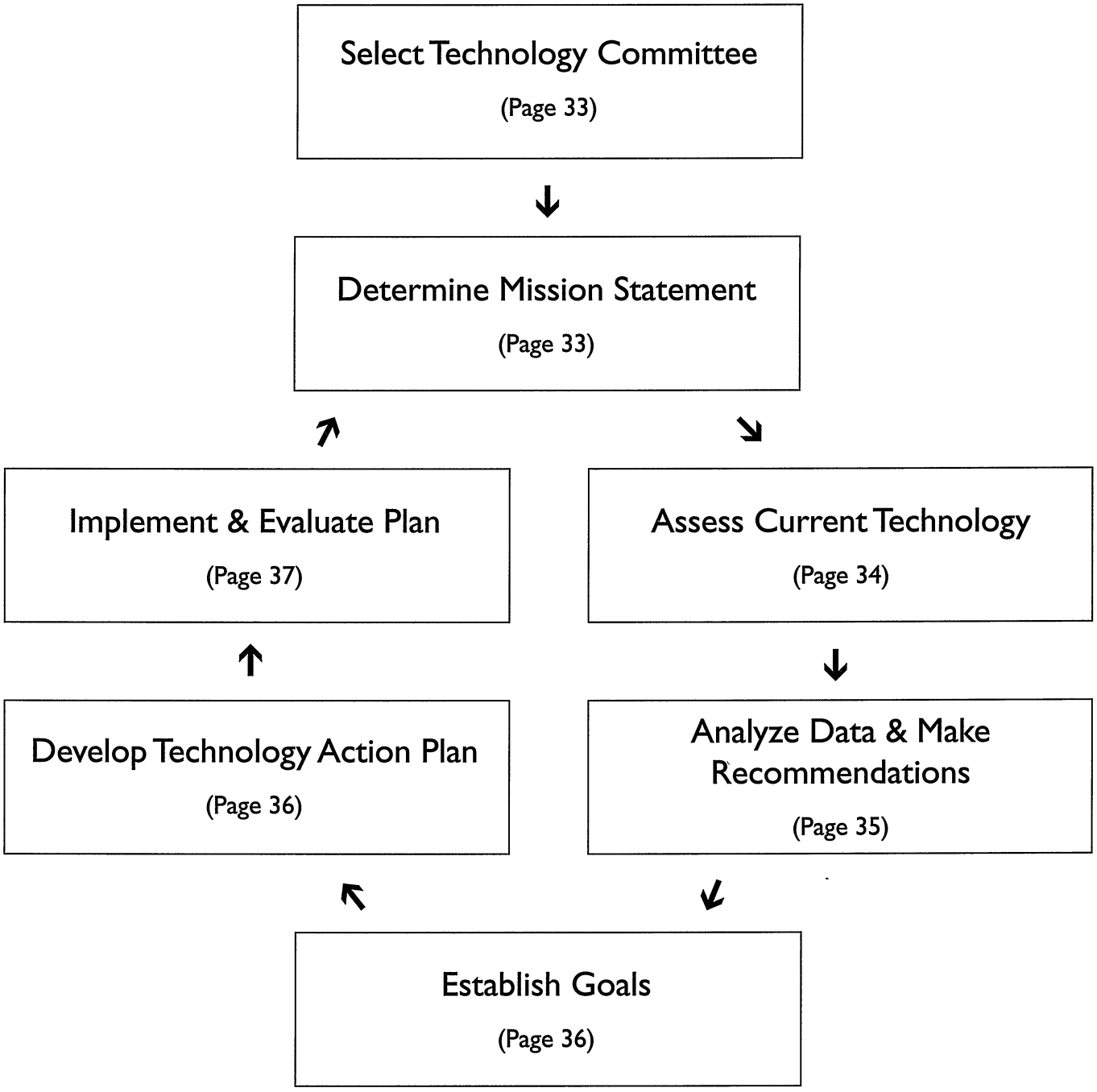
The Department of Elementary and Secondary Education prepared this publication in an effort to assist school districts that are in various stages of providing technology for students and staff. Our staff used several sources in developing this guide — school districts of all sizes, consultants and technical experts. We have tried to compile ideas and suggestions that will help teachers and school district leaders develop effective, long-range plans for using technology in all aspects and levels of education.

This is not a "compliance manual." It is intended to provide helpful ideas and resources, regardless of your school's stage of development. Whether your district has one computer or one hundred, we think you will be better able to meet your needs and keep pace with fast-changing conditions if your district has a comprehensive technology plan.



Robert E. Bartman
Commissioner of Education

# Steps for Developing a District-wide Technology Plan



# Essentials of Long-Range Technology Planning

1. Involve all crucial "stakeholders" in the planning process.
2. Allow sufficient time to develop the initial plan.
3. Remember: Technology planning is an ongoing process.
4. Develop your goals before you develop your action plan.
5. Use internal and external data to make adjustments in your plan.
6. Develop action plans that will get you to your strategic goals.
7. Manage your plan; don't just develop it.
8. Collect data and monitor the progress of your technology plan.
9. Involve others in developing and promoting your plan, including:
   - Faculty
   - Other school staff
   - Parents
   - Community leaders
   - Students

## 1. Select a Well-Rounded Technology Committee

The role of the committee is to identify a philosophy and rationale for the technology plan, conduct district needs assessments, create a technology blueprint, sell the plan and oversee progress. The selection of a fully representative committee helps ensure the selling of the final product and keeps lines of communications open. A strong technology committee can effectively leverage action, mediate disputes and help build consensus among members of the school faculty, administration and community.

The committee should represent the best expertise in the district. Members should include administrators, teachers, support staff, students, parents, board members and community/business leaders. If the district or the technology committee lacks expertise in certain areas, the use of outside consultants may be helpful.

[redacted]

- The technology committee should be a team of decision makers with a broad range of experiences.

- The technology committee should include representatives of each building, grade level, content or program area, and special-interest group.

## 2. Determine the District's Mission Statement Regarding Technology

The committee should be empowered to develop a policy for dealing with technology in the district. It should receive training/inservice in how technology can meet the changing needs of students and educators and help the school district respond to societal expectations. Then, the committee can identify the district's ideals and long-range goals in the form of a technology mission statement. (This mission statement, of course, must be compatible with the district's other existing mission statements.)

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- Visit schools with successful technology programs.
- Ask vendors, university-based technology leaders and/or corporate specialists to present information to the committee about emerging

technologies and how such developments may affect teaching and learning.

- Develop a rationale for change and a vision for the future.
  - — The district's stated goals and outcomes for technology must relate to and support desired curricular outcomes.
  - — Technology planning involves more than reorganizing the curriculum and making plans to buy equipment.

## 3. Assess the Current Status of Technology in the District

The committee should form subcommittees or task groups to document the "who, what, where and why" of technology as it currently exists in the district. Analyze the school setting(s), learner characteristics, school and community resources, and perceived needs (current and future). Identify existing sources of information, and decide what data will need to be collected.

Determine the key technological issues at hand. Develop survey questions that will be submitted to teachers, administrators, clerical staff, students and parents. Be sure to get input from all stakeholders who will be using or affected by emerging technologies. The committee should conduct individual and group interviews to question school staff (and others) about current uses of technology, their attitudes about the potential for improving students' performance with technology, and their recommendations for implementing new technology.

Throughout the process of collecting data and conducting surveys, key issues to be considered by the committee should include:

- Board policy
- Funding
- Acquisition schedules and priorities
- Updating and maintenance of technology
- Potential applications for administration and management
- Potential applications for curriculum and instruction
- Equity
- Staff development and training

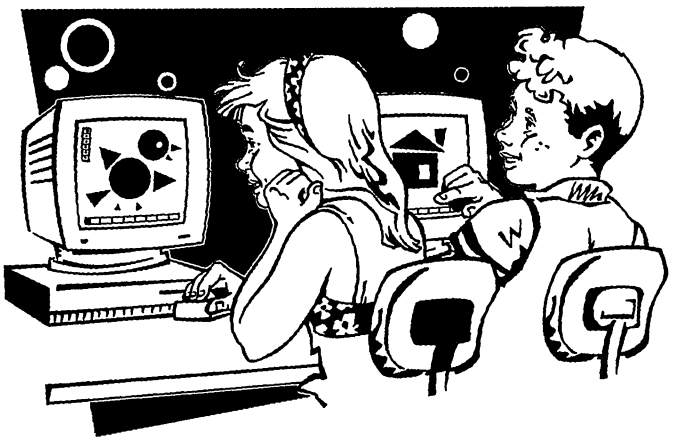
- Technology's place in the district's school improvement plan
- Office automation needs
- Student information and records
- Personnel (Will technology plans and goals require new staff?)
- Networking (within school buildings, among buildings, outside the district)

## 4. Analyze Data to Make Recommendations

Look at what is happening now. In light of the district's mission statement/vision, assess where the district wants to be. Assess the availability of technologies not used currently in the district. Look at the types of instruction in place now, what programs or methods are likely to be "imported" in the future, and how technology could support implementation of new programs.

### Tips & Suggested Activities

- Review the existing uses of technology and media resources within the district and the relationship of these resources to the goals and objectives of the district's school improvement plan.
- Identify content areas and grade levels where technology learner outcomes will be achieved. (What technology concepts should be introduced, and where should they be introduced along the K-12 curriculum?)
- Identify specific areas where existing technology and/or new technology and media resources could support, enhance or expand the school improvement plan.
- Identify specific areas where technology is sought by teachers and staff.
- Identify strengths and weaknesses of the district's current uses of technology as well as potential opportunities or threats that exist outside the district that could affect technology planning and implementation.



## 5. Establish Short- and Long-Range Goals

Compose, discuss and examine numerous goals; scrutinize each for clarity of purpose, attainability, measurability, appropriateness, and how it "fits" the district's mission statement. In the process of developing and clarifying the goal statements, keep in mind the potential implications that these goals may have on staff development activities, funding, and the district's current infrastructure.

### Tips & Suggested Activities

- Develop a list of specific objectives for each goal.
- For each goal, determine how you will know when it has been achieved.
- Look at possible barriers to each goal. Brainstorm practical alternatives, and prioritize the goals accordingly.
- Develop a timelime for implementation, and assign responsibility for achieving specific goals.

## 6. Develop a Technology Action Plan

Creating a multi-year plan enables the committee to revisit the goals and to reassess priorities. A long-term plan also conveys the idea that technology requires more than a one-time influx of funding. The district's mission statement, educational objectives and desired outcomes should drive all purchasing decisions involving technology. The plan should be a solutions-oriented document, not just a "shopping list" of equipment. The action plan should address each building-level plan and cost estimates, the implementation schedule, and the resources needed to carry out the technology plan effectively. The plan should outline strategies and activities for developing staff members' understanding of technology and their abilities to apply it effectively. Finally, the action plan should specify how the impact of technology will be evaluated.

### Tips & Suggested Activities

- Address key issues such as equity, facility needs, locations, security of equipment and data, staff development, leadership and budgets for technology.
- Develop a road map describing where you want to be in year one, year two, year three, etc.

- Consider compatibility issues when considering hardware and software purchases.

- Provide for accountability. Who will carry out various parts of the plan? How will you know or decide if technology is having a measurable or positive impact on students and/or staff?

- Provide for communication about the goals and progress of the technology plan. How and when will you communicate with district personnel, school patrons and the community?

- Provide for the continuous review and evaluation of the district's technology plan; be prepared to update and change the plan as often as required to reflect changing conditions or needs.

## 7. Implement and Evaluate the Technology Action Plan

Create ownership in the final product by including all committee members in the formal presentation of the plan. By increasing the number of people who are advocates for the plan, the chance for successful adoption is enhanced. Continually evaluate the effectiveness and validity of the plan. Monitor the success of your methods and activities and your progress toward the goals and objectives of the plan.

### Tips & Suggested Activities

- Keep staff and the community informed and enthusiastic about new technology. Promote ownership and commitment by teachers as well as support from the school board, administration and community.

- Consider employing a part- or full-time technology director — perhaps a faculty member who is respected throughout the school community and who has a fair amount of expertise in the use of technology.

- Consider going through a request-for-proposals (RFP) or bidding process to select a single vendor for equipment and related services. Make sure potential vendors understand your district's needs and the differences between business and educational applications. Get references about prospective vendors from other schools. Be sure that the specifications in your RFP include all potential costs: equipment/hardware, software and software licenses, cables, wiring, installation, product upgrades, product warranties, service and maintenance, telephone support and training.

- Acquire technology incrementally and integrate it gradually into the curriculum.

- Set up pilot sites for the first-year implementation phase. Begin by giving the technology resources to the teachers who are most eager to make an investment in using them. Offer incentives to teachers who offer exemplary models. Based on experiences gained in the pilot or initial stage, add other schools/programs.

- Develop a deliberate training schedule that allows teachers time to explore and investigate the technology.

- Establish a "buddy teacher" or "buddy school" system to encourage staff to share ideas, frustrations and successful practices.

- Continue to develop and expand technology-related training efforts. Customize training activities to match the needs, inclinations, schedules and experience levels of participating staff members.

- Emphasize technology awareness and expertise when hiring new staff.

- Whenever the district plans to submit bond issue proposals to voters, consider including some amount of money for technology in the proposal.

- Continually review, revise and expand the technology plan. Conduct both summative evaluation (Should a program be continued or terminated?) and formative evaluation (Does a current program or activity need to be adjusted or redirected?). At the very least, review the plan annually and prior to any major purchase of hardware or software.

- Modify parts of the plan — or the entire plan — when evaluation data indicate that there is a need to redirect or redeploy available resources to meet desired instructional goals or implementation timelines.

## Information about District-Level Technology Plans

In preparing this guide, staff members of the Department of Elementary and Secondary Education solicited ideas and sample technology plans from several Missouri school districts, including those listed below. Readers may want to contact the individuals listed here to request samples of plans and other materials which these districts have prepared.

**Carrollton R-VII School District**
Ron Landis, Library Media Specialist
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Carrollton, MO 64633-2342
816/542-3559

**Fulton School District**
Dennis McElroy, Technology Director
2320 North Bluff
Fulton, MO 65251-2731
573/642-2206

**Gideon School District**
David Hollingshead, Technology Coordinator
400 Main Street
Gideon, MO 63848-0227
573/448-3911

**Independence Public Schools**
David Rock, Assistant Superintendent
1231 South Windsor
Independence, MO 64055
816/833-3433

**Ladue School District**
Elizabeth Schwartz, Assistant Superintendent
9703 Conway Road
St. Louis, MO 63124-1698
314/994-7080

**Lee's Summit School District**
Sharon Early, Library Media Coordinator
600 SE Miller
Lee's Summit, MO 64063-4297
816/524-3368

**Ritenour School District**
Dwight Guerrant, Technology Coordinator
2420 Woodson Road
St. Louis, MO 63114-5499
314/426-9529

**St. Louis Public Schools**
Philip J. Brody, Director
Division of Technology
911 Locust Street
St. Louis, MO 63101-1471
314/776-1644

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### Need More Information or Assistance?

This publication was developed by a committee of staff members from several sections and programs in the Department of Elementary and Secondary Education. It was written primarily by personnel in the Special State Instructional Programs Section (Division of Instruction). For more information or assistance with your district's technology-related activities, contact:


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